

Five new records for the lichen biota of Turkey

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Abstract—Five lichen species (*Bacidia sipmanii*, *Buellia caldesiana*, *Byssoloma leucoblepharum*, *Collema occultatum* and *Porina lectissima*) are reported for the first time from Turkey. For each a short description is presented.

Key Words —biodiversity, Giresun, Konakönü

Introduction

Large parts of Turkey are still very insufficiently explored with regard to their lichen biota. In the last four years, however, many new lichen species have been reported for Turkey (e.g. Aslan et al. 2005, Breuss & John 2004, Candan & Özdemir Türk 2008, Çobanoğlu et al. 2008, Halıcı et al. 2007, Kınalıoğlu 2009a,b, Tufan et al. 2005, Yazıcı 2007 et al.).

For Trabzon province in the eastern Black Sea region 518 species have been reported (John 1995 [and references therein], 1999, 2000, 2002; John & Breuss 2004; John & Nimis 1998; John et al. 2000; Kınalıoğlu 2007b, 2008; Kınalıoğlu & Engin 2004; Yazıcı 1996, 1999, 2006; Yazıcı & Aslan 2002, 2005) and for Giresun province only 431 species (Aslan et al. 2002; Aslan & Yazıcı 2006; Duman & Yurdakulol 2007; Halıcı & Şenkardeşler 2009; John & Breuss 2004; Kınalıoğlu 2005, 2006, 2008, 2009; Kınalıoğlu & Engin 2004; Küçük 1990; Özgen et al. 2003; Steiner 1909; Süleyman et al. 2002; Yazıcı 2006; Yazıcı & Aptroot 2008). The present paper is a further contribution to the lichen biota of these provinces.

Materials and methods

Samples were collected in Trabzon and Giresun provinces between 2006 and 2008. They were identified with various lichen guides (e.g. Brodo et al. 2001, Purvis et al. 1992, Wirth 1995). The specimens are stored in the herbarium

of the Faculty of Science and Arts, Giresun University, Giresun, Turkey; with some duplicates in herb. H. Sipman. The accession numbers of the collections are given in parentheses after the locality details.

Taxonomy

Bacidia sipmanii M. Brand et al.

A detailed description is provided by Brand et al. (2009).

The Turkish specimen was collected from siliceous rock. Thallus crustose, thin, small, areolate, grey-brown. Apothecia 0.1–0.9 mm diam., often few; disc slightly convex, light brown to dark brown or blackish brown, with a darker margin. Hymenium colourless, 43–60 μm tall; paraphyses simple, apices slightly swollen to 2 μm . Ascospores colourless, 25–45 $\times$ 1.5–2.5 μm , 4–8 celled. Conidia 20–28 $\times$ 0.8–0.9 μm , strongly curved. Thallus C–, K–, KC–, PD–.

Known from England, Ireland, France, Italy, and the Canary Islands on siliceous maritime rocks in the xeric supralittoral zone in crevices and underhangs, on vertical shaded volcanic outcrops and rarely on soil (Brand et al. 2009).

SPECIMEN EXAMINED: Trabzon, Araklı, Konakönü place, sea shore, 40°57'17"N, 40°02'56"E, 3 m, 12 Aug. 2006, on siliceous rock, det. H. Sipman, (Kınalıoğlu 1568).

Buellia caldesiana Bagl.

A detailed description is provided by Scheidegger (1993).

The Turkish specimen was collected from siliceous rock. Thallus light yellowish or dirty white, crustose, rimose to areolate. Apothecia 0.3–0.8 mm diam, immarginate to thinly marginate; disc black, plane, weakly whitish pruinose. Hymenium 60–75 μm tall; epithecium olive. Hypothecium dark brownish. Asci *Lecanora*-type. Ascospores brown, 1-septate, oblong, 12–13 $\times$ 6.5–7 μm . Conidia not observed. Thallus C + orange.

Known from Europe on more or less calcareous rocks (Scheidegger 1993).

SPECIMEN EXAMINED: Giresun, Center, SE slope of Gedikkaya hill, 40°54'35"N, 38°24'48"E, 190 m, 10 June 2006, on siliceous rock, det. H. Sipman, (Kınalıoğlu 1544).

Byssoloma leucoblepharum (Nyl.) Vain.

A detailed description is provided by Purvis et al. (1992).

The Turkish specimen was collected from *Erica arborea*. Thallus crustose, brownish-greyish, mostly thin. Apothecia 0.3–1.1 mm diam, flat; disc dark orange-brown, with a white-grey woolly margin spreading onto the thallus surface. Hypothecium brownish. Ascospores 10–17 $\times$ 2.5–4 diam., 4-celled, colourless. Thallus C–, K–, KC–, PD–.

Widely distributed in tropical and subtropical regions, extending to the temperate zone, on bark and leaves (Purvis et al. 1992).

SPECIMEN EXAMINED: Trabzon, Araklı, Konakönü place, 40°57'44"N, 40°02'32"E, 8 m, 12 Aug. 2006, on *Erica arborea*, det. H. Sipman, (Kınalıoğlu 1690).

Collema occultatum Bagl.

A detailed description is provided by Purvis et al. (1992) and Zedda et al. (2009: 157).

The Turkish specimen was collected from *Fraxinus* sp. Thallus small, dark brownish, mostly scattered lobes, subcrustose to minutely globose or with foliose lobes. Apothecia dispersed or aggregated; disc 0.2–0.4 mm diam., flat to convex, brown, pink when young and black when mature. Ascospores 13–21.5 × 9–15 µm, cuboid-oblong, submuriform.

Known from Europe (especially Mediterranean region), North Africa and North America, on bark. (Purvis et al. 1992, Zedda et al. 2009).

SPECIMEN EXAMINED: Trabzon, Araklı, Konakönü place, 40°57'44"N, 40°02'32"E, 8 m, 12 Aug. 2006, on *Fraxinus* sp., det. H. Sipman, (Kınalıoğlu 1694).

Porina lectissima (Fr.) Zahlbr.

A detailed description is provided by Purvis et al. (1992).

The Turkish specimen was collected from siliceous rock. Thallus brownish green, irregularly cracked, thin. Perithecia reddish dark brown or partly pinkish, projecting above the thallus surface, 0.2–0.4 mm diam. Ascospores 3-septate when mature, fusiform, colourless, 20–32 × 4–8 µm. Asci 8-spored, thin walled.

Known from Europe and North America on damp siliceous rock (Purvis et al. 1992).

SPECIMEN EXAMINED: Trabzon, Araklı, Konakönü place, sea shore, 40°57'17"N, 40°02'56"E, 3 m, 12 Aug. 2006, on siliceous rock, det. H. Sipman, (Kınalıoğlu 1569).

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